CLAIM AMENDMENTS

1	1. (currently amended) A method for controlling input/output (I/O) operations of
2	a user's computer comprising the following steps:
3	implementing the user's computer as a virtual machine (VM);
4	including a virtual machine monitor (VMM) as a VM-transparent interface
5	between the VM and a physical computer system that includes at least one device;
6	in the VMM:
7	sensing a request for an I/O operation between the VM and the device;
8	performing a predetermined transformation of I/O data passing between
9	the VM and the device, said transformation being adjunct to necessary completion of
10	the request, as issued, for the I/O operation;
11	the transformation of the I/O data thereby being undefeatable by any user action
12	initiated via the VM.
1	2. (currently amended) A method as in claim 1, in which:
2	the device is a display;
3	the I/O data is VM display data output from the VM and intended for display; and
4	the predetermined transformation is a replacement of at least a portion of the VM
5	display data with non-defeatable display data stored external to the VM but accessible
6	to the VMM;
7	further including the step of displaying the VM display data with the non-
8	defeatable display data overlaid.
1	
1	3. (currently amended) A method as in claim 1, further including the following
2	steps:
3	filtering the I/O data with respect to at least one prodotormined filtering condition;
4	and
5	performing the predetermined transformation of the I/O data only when the
6	filtering condition is met.
1	

1	4. (currently amended) A method as in claim 3, in which the littering condition is
2	that the I/O data includes at least one predetermined restricted term.
1	
1	5. (currently amended) A method as in claim 3, in which the filtering condition is
2	that the I/O data is from a predetermined restricted source.
1	
1	6. (currently amended) A method as in claim 3, in which:
2	the I/O data includes image data;
3	the step of filtering the I/O data comprises detecting the presence of a
4	representation of a target image within the image data; and
5	the predetermined transformation is substitution of a representation of a
6	replacement image in place of the representation of the target image.
1	
1	7. (original) A method as in claim 6, in which:
2	the I/O data is in a non-character image format;
3	the target image is a representation of a restricted character string; and
4	the step of filtering the I/O data comprises applying character recognition to the
5	I/O data.
1	
1	8. (currently amended) A method as in claim 3, in which the predetermined
2	filtering condition in is the presence in the I/O data of a copy protection indication.
1	
1	9. (currently amended) A method as in claim 1, in which the predetermined
2	transformation comprises insertion into the I/O data of a source indication associated
3	with the VM.
1	
1	10. A method as in claim 1, in which the transformation is time-varying.
1	Ad the Section IV Annual Control of the Art
1	11. (original) A method as in claim 1, in which the device is a network
2	connection device.

Docket: VMware11

3	12. (currently amended) A method as in claim 11, in which the predetermined
4	transformation is a bandwidth limiting of the I/O data being transferred between the VM
5	and the network connection device.
1	
1	13. (currently amended) A method as in claim 11, in which:
2	the requested I/O operation is a transfer of the I/O data between the VM and the
3	network connection device; and
4	the predetermined transformation is a time delay of the transfer.
1	·
1	14. (currently amended) A method as in claim 11, in which:
2	the requested I/O operation is a transfer of the I/O data from the VM to a first
3	destination address via the network connection device;
4	the predetermined transformation is a redirection of the I/O data to a second
5	destination address different from the first.
1	
1	15. (currently amended) A method as in claim 1, in which:
2	the device is a display;
3	the display renders data stored in a display map; and
4	the step of performing the predetermined transformation comprises altering a
5	selected portion of the display map.
1	
1	16. (currently amended) A method as in claim 15, in which the step of altering
2	the selected portion of the display data comprises substituting predetermined, non-
3	defeatable display data for the selected portion.
1	
1	17. (currently amended) A method as in claim 15, in which the step of altering
2	the selected portion of the display data comprises changing all occurrences in the
3	display map of a display color to a prodetermined replacement color.
1	

1

1	18. (currently amended) A method as in claim 1, in which:
2	the device is a data storage device;
3	the requested I/O operation is a transfer of data between the VM and the storage
4	device; and
5	the step of performing the prodetermined transformation comprises changing at
6	least a portion of the data during the transfer between the VM and the storage device.
1	
1	19. (currently amended) A method as in claim 18, in which the step of
2	performing the predetermined transformation of the I/O data comprises encrypting data
3	written by the VM to the data storage device and decrypting data read from the data
4	storage device by the VM.
1	
1	20. (currently amended) A method as in claim 18, in which the step of
2	performing the predetermined transformation of the I/O data comprises compressing
3	data written by the VM to the data storage device and decompressing data read from
4	the data storage device by the VM.
1	
1	21. (currently amended) A method as in claim 1, in which:
2	the device is a network connection device;
3	the requested I/O operation is a transfer of data between the VM and the network
4	connection device; and
5	the step of performing the predetermined transformation comprises changing at
6	least a portion of the data during the transfer between the VM and the network
7	connection device.
1	
1	22. (currently amended) A method as in claim 21, in which the step of
2	performing the predetermined transformation of the I/O data comprises encrypting data
3	written by the VM to the network connection device and decrypting data read from the
4	network connection device by the VM.
1	

1	23. (currently amended) A method as in claim 21, in which the step of
2	performing the predetermined transformation of the I/O data comprises compressing
3	data written by the VM to the network connection device and decompressing data read
4	from the network connection device by the VM.
1	
1	24. (currently amended) A method as in claim 1, in which the step of
2	performing the predetermined transformation of the I/O data comprises cryptographic
3	transformation of the I/O data.
1	
1	25. (currently amended) A method as in claim 1 3, in which:
2	the VM supports a plurality of I/O modes;
3	the step of filtering is performed on I/O data corresponding to a first one of the
4	plurality of I/O modes; and
5	the predetermined transformation is applied to I/O data in a second one of the I/O
6	modes when the I/O data in the first I/O mode satisfies the \underline{a} transformation-triggering
7	criterion.
1	
1	26. (original) A method as in claim 25, in which the I/O modes include a video
2	mode and an audio mode.

1

1	
1	27. (currently amended) A method for controlling input/output (I/O) of a user's
2	computer comprising the following steps:
3	implementing the user's computer as a virtual machine (VM);
4	including a virtual machine monitor (VMM) as a VM-transparent interface
5	between the VM and a physical computer system that includes at least one device that
6	carries out an I/O operation on the basis of device control data;
7	storing the device control data associated with the VM in a buffer in the VMM;
8	upon sensing a transformation command from an administrative system external
9	to the VM, entering replacement data into at least a portion of the buffer said
10	replacement data being entered as a processing step that is adjunct to the necessary
11	completion of the I/O operation;
12	the entry of the replacement data thereby being undefeatable by any user action
13	initiated via the VM.
1	
1	28. (currently amended) A system for controlling input/output (I/O) operations of
2	a user's computer, comprising:
3	a virtual machine (VM) constituting the user's computer;
4	a virtual machine monitor (VMM) forming a VM-transparent interface between the
5	VM and a physical computer system that includes at least one device;
6	the VMM including means:
7	for sensing a request for an I/O operation between the VM and the device;
8	and
9	for performing a predetermined transformation of I/O data passing
10	between the VM and the device, said transformation being adjunct to necessary
11	completion of the request, as issued, for the I/O operation;
12	the transformation of the I/O data thereby being undefeatable by any user action
13	initiated via the VM.

1

Docket: VMware11

1	29. (original) A system as in claim 28, in which the device is a display and the
2	I/O data is VM display data.
1	
1	30. (original) A system as in claim 29, further comprising:
2	a display buffer within the VMM for storing the VM display data that is output from
3	the VM and is intended for display; and
4	transformation means located within the VMM for replacing at least a portion of
5	the VM display data stored in the display buffer with non-defeatable display data;
6	in which the display is provided for displaying the contents of the display buffer.
1	
1	31. (original) A system as in claim 28, in which the device is a data storage
2	device.
1	
1	32. (original) A system as in claim 28, in which the device is a network
2	connection device.
1	

Docket: VMware11